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Air Pollution - St. Louis Park

After discussions with the city of St. Louis Park on ground water pollution, Mr. Horner and I had an opportunity to look over into the problems of air pollution, briefly.

Plant personnel have shown considerable initiative in attempting cleanup of vented material with equipment available, as indicated in Mr. Finch's letter of September 24.

- a) Air condensers and a (water) spray scrubber have been installed on the receiving tanks, said to be quite effective, though not perfect.
- b) A water spray condenser has been installed on the vent stacks from the distillate pans. It is said to have improved matters considerably but requires addition of considerable fresh water to keep exhaust temperatures down and minimize exhaust of fumes.

A combustion process appears to provide the most positive method of eliminating odors from pans and tanks mentioned above. However, as the fumes are generated intermittently, and contain crystallizing material, the operation of such a process could be troublesome.

I feel that the most effective system would consist of an oil scrubber to clean the gas of oil fog and solids, with the effluent non-condensable gas-air mixture being discharged (dumped) into a boiler firebox or similar equipment, using a safety system similar to that used in the Minnesota Street Plant. As the water scrubbers are already installed they could perform as oil scrubbers by replacing the water with a suitable non-crystallizing oil and adding a simple double pipe water-oil heat exchanger in the circulating system.

Meanwhile we could proceed with plans for scrubber redesign if indicated, and fixed gas combustion equipment. Hopefully the performance of the modified system mentioned in the paragraph above would be available to preview problems associated with such an installation. I would not give a cost estimate at present but would guess that installation would involve \$5,000.

The fume problem associated with removal of trams from the cylinders was discussed. Plant personnel seemed to feel this was not a major offender, but difficult to eliminate.

The discharge from the ejector on the creosoting cylinder is thought to contribute heavily to air pollution. This unit should be fitted with a surface condenser to eliminate the steam-oil vapor discharge to atmosphere. The condenser cost is modest, but I would like to review the cooling water situation before guessing at an overall cost.

It would be desirable to have plans under way by the time we are scheduled to talk with the City Council of St. Louis Park. This is currently set for December 22 although it is hoped that it can be postponed.

Very truly yours,

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WRW/ekb

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